

**CLAIMS**

What is claimed is:

5

1. A method for object-oriented management of serializable objects, the method comprising:

identifying an object, wherein the object comprises a set of attributes;

10

associating a class version identifier with the object, wherein the class version identifier identifies the object as an instance of a specific version of a class; and

15

associating an attribute version identifier with an attribute in the set of attributes.

20

2. The method of claim 1 wherein an attribute version identifier represents a version of a class for an associated attribute in which the associated attribute was initially declared within the class.

25

3. The method of claim 1 further comprising:

writing a data stream representing an object serialization of the object, wherein the data stream comprises the class version identifier of the object, an attribute value for an attribute in the set of attributes, and an attribute version identifier for an attribute in the set of attributes.

T03299-9606350







14. A computer program product on a computer readable medium for use in a data processing system for object-oriented management of serializable objects, the computer program product comprising:

5       instructions for identifying an object, wherein the object comprises a set of attributes;

          instructions for associating a class version identifier with the object, wherein the class version identifier identifies the object as an instance of a  
10       specific version of a class; and

          instructions for associating an attribute version identifier with an attribute in the set of attributes.

15       15. The computer program product of claim 14 wherein an attribute version identifier represents a version of a class for an associated attribute in which the associated attribute was initially declared within the class.

20       16. The computer program product of claim 14 further comprising:

          instructions for writing a data stream representing an object serialization of the object, wherein the data stream comprises the class version identifier of the object, an attribute value for an attribute in the set of  
25       attributes, and an attribute version identifier for an attribute in the set of attributes.

17. The computer program product of claim 16 further comprising:

30       instructions for writing a class identifier for the class of the object into the data stream.

09304096-063001  
T00000-9604060





25. A computer program product on a computer readable medium for use in a data processing system for providing backwards and forwards compatibility between different versions of serialized object data, the computer program product comprising:

instructions for identifying an object, wherein the object comprises a set of attributes, wherein each attribute in the set of attributes is associated with a version identifier, and wherein the object is an instance of a first version of a class;

instructions for writing a data stream representing serialization of the object's attributes and associated version identifiers;

instructions for reading a data stream representing a serialized object into a new object instance of a second version of a class; and

instructions for refraining from storing attributes from the data stream into the new object instance that are not represented in the new object instance while reading the data stream.

26. The computer program product of claim 25 further comprising:

instructions for specifying default values for attributes in the new object instance for which attribute values were not read from the data stream.



27. An apparatus for object-oriented management of serializable objects, the apparatus comprising:

means for identifying an object, wherein the object comprises a set of attributes;

5 means for associating a class version identifier with the object, wherein the class version identifier identifies the object as an instance of a specific version of a class; and

10 means for associating an attribute version identifier with an attribute in the set of attributes.

28. The apparatus of claim 27 further comprising:

15 means for writing a data stream representing an object serialization of the object, wherein the data stream comprises the class version identifier of the object, an attribute value for an attribute in the set of attributes, and an attribute version identifier for an attribute in the set of attributes.

20 29. The apparatus of claim 27 further comprising:

25 means for reading a data stream representing a serialized object, wherein the data stream comprises a serialized class version identifier, a set of serialized attribute values, and a set of serialized attribute version identifiers, wherein serialized attribute version identifiers in the set of serialized attribute version identifiers are paired with serialized attribute values in the set of serialized attribute values.

0934096.062304  
T08230.9546860

30. An apparatus for providing backwards and forwards compatibility between different versions of serialized object data, the apparatus comprising:

means for identifying an object, wherein the object  
5 comprises a set of attributes, wherein each attribute in the set of attributes is associated with a version identifier, and wherein the object is an instance of a first version of a class;

means for writing a data stream representing  
10 serialization of the object's attributes and associated version identifiers;

means for reading a data stream representing a  
serialized object into a new object instance of a second version of a class; and

15 means for refraining from storing attributes from the data stream into the new object instance that are not represented in the new object instance while reading the data stream.